

**REMARKS**

As a preliminary matter, it is noted that the Examiner has not initialed USP No. 6,287,947 listed on the PTO-1449 form filed on June 13, 2005 without providing any basis for not doing so (it appears this may have been an inadvertent oversight by the Examiner). It is respectfully requested that the Examiner provide Applicants another initialed copy of the PTO-1449 form which initials USP No. 6,287,947 so as to make the record clear that each of the prior art references cited therein have been considered.

Solely in order to expedite prosecution by reducing issues, claims 8-14 and 23-30 have been canceled without prejudice/disclaimer to the subject matter embodied thereby, rendering the rejections thereto moot. In view of the following remarks, it is respectfully submitted that all pending claims are in condition for allowance.

Claims 1 and 15 are independent and stand rejected under 35 U.S.C. § 102 as being anticipated by Chua et al. '683 ("Chua"). This rejection is respectfully traversed for the following reasons.

Claim 1 recites in pertinent part, a "transparent electrode [which] contains an *impurity element* developing the *same conductivity type* as that of an impurity element introduced into a semiconductor ..., said semiconductor *having an interface* with the transparent electrode, and the impurity element contained in the transparent electrode *is diffused into the semiconductor ...*" (emphasis added). As described on, for example, page 12, lines 7-12 of Applicants' specification, such an arrangement can enable the capability to decrease contact resistance between the electrode and semiconductor layer.

The Examiner alleges that Chua discloses a transparent electrode 118 and semiconductor layers 108-114. However, the Examiner does not identify any portion of Chua which allegedly discloses that the alleged transparent electrode 118 contains an impurity element, let alone in the specified manner set forth in claim 1. In imposing a rejection under 35 U.S.C. §102, the Examiner is required to point to "page and line" wherein an applied reference is perceived to identically disclose each feature of a claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (Fed. Cir. 1993); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984). In the instant case, the Examiner merely concludes that Chua discloses the claimed characteristics of the transparent electrode including the relative relation to the semiconductor, but does not point to any page or line of Chua which supports the Examiner's conclusion.

Indeed, it is respectfully submitted that Chua appears to be completely silent as to the alleged transparent electrode 118 containing an impurity element, let alone suggest the specified manner of doing so set forth in claim 1. Chua merely discloses that the transparent electrode 118 "is typically a transparent conductive material such as Indium Tin Oxide (ITO) or Zinc oxide" (*see* paragraph [0040]), but is silent as to impurity content in the manner set forth in claim 1.

Claim 15 recites in pertinent part, a "passivation film [which] contains an *impurity element* developing the *same conductivity type* as that of an impurity element introduced into a semiconductor ..., said semiconductor *having an interface* with the passivation film, and the impurity element contained in the passivation film *is diffused into the semiconductor ...*" (emphasis added). As described on, for example, page 32, line 18 – page 33, line 4 of Applicants' specification, such an arrangement can enable the capability to decrease contact

resistance between the electrode and semiconductor layer. The Examiner alleges that Chua discloses a passivation film 116. However, similarly to the discussion above regarding claim 1, it is respectfully submitted that the Examiner does not identify any portion of Chua which allegedly discloses that the alleged passivation film 116 contains an impurity element, let alone in the specified manner set forth in claim 15. The Examiner merely concludes that Chua discloses the claimed characteristics of the passivation film including the relative relation to the semiconductor, but does not point to any page or line of Chua which supports the Examiner's conclusion.

Indeed, it is respectfully submitted that Chua appears to be completely silent as to the alleged passivation film 116 containing an impurity element, let alone suggest the specified manner of doing so set forth in claim 15. Chua merely discloses that the passivation film 116 "is typically an insulating thin film such as silicon dioxide or silicon nitride deposited by plasma enhanced chemical vapor epitaxy (PECVD)" (*see* paragraph [0040]), but is silent as to impurity content in the manner set forth in claim 15.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (**noting that "inherency may not be established by probabilities or possibilities"**, *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Chua does not anticipate claims 1 and 15, nor any claim dependent thereon.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*,

**Application No.: 10/717,557**

819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as claims 1 and 15 are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 102 be withdrawn.

### **CONCLUSION**

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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